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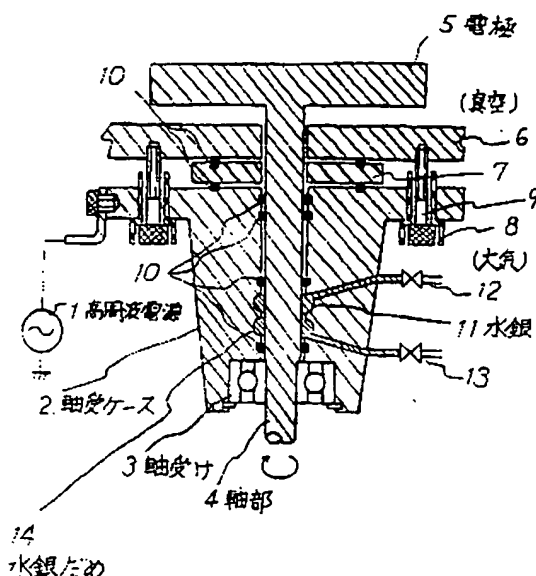
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TITLE : REACTIVE ION ETCHING APPARATUS



ABSTRACT : PURPOSE: To supply high frequency power to electrodes independently of abrasion, by a structure wherein a bearing case, which supports an electrode to be rotated in a vacuum vessel, is filled with an electrically conductive liquid so that the conductive liquid is contact with the electrode, and the conductive liquid is used as a connection terminal for the high frequency power.

CONSTITUTION: A shaft section 4 of an electrode 5 to be rotated in a vacuum vessel 6 is supported by a bearing case 2 through a bearing 3. The bearing case 2 is secured to a case 6 through an insulating spacer 8 by hexagon socket head cap screws 9, and while insulating spacers 7, 8 electrically insulate between the case 2 and the case 6. O rings 10 are disposed between the shaft section 4 of the electrode 5 and the case 2. A mercury reservoir 14, which is formed by the upper and lower O rings 10, the outer peripheral surface of the shaft section 4, and the inner peripheral surface of the case 2, is filled with mercury 11. Simultaneously, both a mercury feed valve 12 and a mercury discharge valve 13 are provided, and the shaft section 4 of the electrode 5 and the case 2 are electrically connected to each other through the mercury 11.

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